

Researcher



Who is working on the Genotyping by Sequencing (GBS) method described in Elshire, *et al* (2011)?

Focused on staying abreast of new findings and techniques in his area of expertise

Monitors closely the research activities within his sub-discipline and across relevant fields (e.g., genomics; bioinformatics)

Wants to find new ways of connecting with peers in related specialties

Engages in many professional activities: research, teaching, mentoring, project development

Mandated to submit peer-reviewed research to departmental repository

Policy Maker



I need to know everything about a 2005 USDA-approved study of genetically-engineered wheat.

Needs to respond to current administration priorities and deal with long-term organizational needs and challenges

Has access to staff who actually perform preliminary information gathering and filtering tasks

Is interested only in very narrowly targeted sources that fulfill specific needs

Technologically capable and sophisticated, but has neither the time nor interest in searching a system or reviewing large numbers of documents

Small Producer



I want to explore organic growing techniques. Where should I start?

Needs access to latest agricultural techniques

Needs to be agile to respond to changing market demands

Needs to maintain current knowledge of farming regulations

Limited financial resources

Interested in sources of funding for special initiatives and day-to-day operations

Has access to trade association resources as a member

Has access to digital information, but is unsure about how to find useful information

Information Professional



Is there a source of aggregated data on historical cattle prices?

Supports all user groups

Expert knowledge of information retrieval tools and techniques

Good knowledge of USDA agency structure and functions

Proactive about upcoming user interests and future needs

Agribusiness Executive



I need to learn about exporting to the Asian beef market. What kind of material is available?

Maintains an expert-level knowledge of agriculture, specific to a relevant industry

Technologically proficient

Has access to staff support

Sits on board of directors for major trade association

Can contact upper-level USDA personnel to address needs

Needs access to variety of sources: scientific publications; trade journals; data sets

Citizen



What foods should I avoid during pregnancy?

Becomes interested in agricultural topics only at specific points, in response to specific triggers

These triggers can be internal (e.g., personal nutritional needs) or external (e.g., an outbreak of foodborne illness)

Experienced at general web searching which shapes her expectations of other information systems

Does not want to learn a specialized system

Is interested only in full-text documents



Researcher

Focused on staying abreast of new findings and techniques in his area of expertise

Monitors closely the research activities within his sub-discipline and across relevant fields (e.g., genomics; bioinformatics)

Wants to find new ways of connecting with peers in related specialties

Engages in many professional activities: research, teaching, mentoring, project development

Mandated to submit peer-reviewed research to departmental repository

Scenario

Background

An advanced researcher with his own lab specializing in genomic data analysis. After developing a new method for DNA sequencing is interested in refinements by improved sample quality

Need Statement

What papers were published by Elshire on the Genotyping by Sequencing (GBS) method similar to the item below?

Elshire RJ, Glaubitz JC, Sun Q, Poland JA, Kawamoto K, Buckler, ES, and SE Mitchell. (2011) A Robust, Simple Genotyping-by-Sequencing (GBS) Approach for High Diversity Species. *PLoS ONE*, 6(5).



Experience with General Web Searching



Knowledge of Literature Databases



Amount of Interest in Searching



Agricultural Expertise

Use Case

Performs Advanced Search

Types "GBS or 'Genotyping by Sequencing'" in search box ("or" is entered by the user and used by the service as a Boolean operator)

Adds "Elshire" and limits it to an author-field search

Limits search by year of publication to items published in 2011 to present

Finds and clicks "Search" button

Reviews items retrieved

Reviews all 4 items retrieved

Marks items to get full text

Finds and clicks link to mark all items

Finds and clicks link to download all pdfs associated with 4 records

Ends session



Policy Maker

Needs to respond to current administration priorities and deal with long-term organizational needs and challenges

Has access to staff who actually perform preliminary information gathering and filtering tasks

Interested only in very narrowly targeted sources that fulfill specific needs

Technologically capable and sophisticated, but has neither the time nor interest in searching a system or reviewing large numbers of documents

Scenario

Background

High-level USDA administrator has to respond to a controversial finding of genetically-modified wheat in an Oregon farm that was traced to a US government-funded study performed by the Monsanto Company

Need Statement

I need to know everything about a 2005 USDA-approved study of genetically-engineered wheat.

Use Case

Performs Quick Search using keywords

Types "USDA and Monsanto and 2005 ("and" is typed by the user and used as a Boolean operator)
Finds and clicks "Search" button

Reviews items retrieved

Reviews all 7 items retrieved

Marks items to get full text

Finds and clicks link to mark all items
Finds and clicks link to download all pdfs associated with 7 records

Edits search by removing 2005 as a keyword

Retrieves new set with 22 items

Marks items to get full text

Finds and clicks link to mark all items
Finds and clicks link to download all pdfs associated with 22 records

Marks items to email citations

Finds and clicks link to mark all items
Finds and clicks link to email all citations associated with 22 records
Is prompted for email address
Types his assistant's email address
Clicks enter
System confirms citations were sent to email address specified by user

Ends session



Experience with
General Web
Searching



Knowledge of
Literature
Databases



Amount of Interest
in Searching



Agricultural
Expertise



Small Producer

Needs access to latest agricultural techniques

Needs to be agile to respond to changing market demands

Needs to maintain current knowledge of farming regulations

Limited financial resources

Interested in sources of funding for special initiatives and day-to-day operations

Has access to trade association resources as a member

Has access to digital information, but is unsure about how to find useful information

Scenario

Background

Interested in possibility of switching growing to pesticide-free practices and wants to find newest techniques in organic farming

Need Statement

I want to explore organic growing techniques. Where should I start?

Use Case

Performs Quick Search using keywords

Types "organic farming" (as a phrase with quotation marks) and techniques (as a single word) into main search box ("and" is not typed by the user)
Finds and clicks "Search" button

Reviews items retrieved

Reviews first 10 items of 33,720 result set
Clicks on title of first item
Reviews record, looking for further details on content

Accesses item to review full text

Clicks on "PDF" link to get more information about item to determine relevance and pertinence
Scrolls through document
Rejects item because it seems more like a scientific article than a tool for practitioners

Reviews items retrieved

Goes on to review more records
Selects several items for download
Finds and clicks link to download all items selected

Ends session



Experience with General Web Searching



Knowledge of Literature Databases



Amount of Interest in Searching



Agricultural Expertise



Information Professional

Supports all user groups

Expert knowledge of information retrieval tools and techniques

Good knowledge of USDA agency structure and functions

Proactive about upcoming user interests and future needs

Scenario

Background

Has a patron who wants to track the prices of different classes of cattle products, as reported by the USDA Agricultural Marketing Service

Need Statement

Is there a source of aggregated data on US cattle prices?

Use Case

Performs Advanced Search using Subjects

Finds and clicks link for "Thesaurus Search"

Types prices into search box
Finds and clicks "Search" button
Reviews 15 items retrieved
Clicks on "commodity prices"
Reads NALT entry

Returns to Advanced Search

Types "commodity prices" into search box
Uses drop down function to select Subject
Clicks "Search"

Reviews items retrieved

Reviews 27 items retrieved
Clicks link for 4th item
Reviews record

Selects this item for download

Clicks on "PDF" link to get full text

Ends session



Experience with General Web Searching



Knowledge of Literature Databases



Amount of Interest in Searching



Agricultural Expertise



Agribusiness Executive

Expert-level knowledge of agriculture, specific to a relevant industry

Technologically proficient

Has access to staff support

Sits on board of directors for major trade association

Can contact upper-level USDA personnel to address needs

Needs access to variety of sources: scientific publications; trade journals; data sets

Scenario

Background

Head of a large US beef producer wants to expand to a foreign market that has very specific market demands and government regulations

Need Statement

I need to learn about exporting to the Asian beef market. What kind of material is available?

Use Case

Performs Quick Search using keywords

Types "beef market Asia" into main search box with no quotation marks or search operators
Finds and clicks "Search" button

Reviews items retrieved

Reviews first 10 items of 1,672 result set

Returns to main search interface

Sees Year under heading "Limit Your Search"

Edits search using "Year" facet

Clicks on "Year" under "Limit your search"
Selects current year

Reviews new items retrieved

Selects several items for download

Finds and clicks link to download all items selected

Ends session



Experience with General Web Searching



Knowledge of Literature Databases



Amount of Interest in Searching



Agricultural Expertise



Citizen

Becomes interested in agricultural topics only at specific points, in response to specific triggers

These triggers can be internal (e.g., personal nutritional needs) or external (e.g., an outbreak of foodborne illness)

Experienced at general web searching which shapes her expectations of other information systems

Does not want to learn a specialized system

Is interested only in full-text documents

Scenario

Background

Just found out she is pregnant and wants to make sure she does not eat anything that would damage her health

Need Statement

What foods should I avoid during pregnancy?

Use Case

Performs Quick Search using keywords

Types pregnant food avoid into main search box with no quotation marks or search operators
Finds and clicks "Search" button

Reviews items retrieved

Reviews first 10 items of 120 result set
Clicks on title of 4th item
Reviews record, looking for further details on content
Rejects item because it is in too scientific
Returns to result set

Edits search

Types pregnant nutrition (sic) into main search box
System prompts with a message "Did you mean nutrition?"
Finds and clicks box marked "Yes"
Clicks "Search" button

Reviews items retrieved

Selects one item for download

Finds and clicks link to download item selected
Skims first few pages of document
Judges item to be relevant and pertinent

Ends session



Experience with General Web Searching



Knowledge of Literature Databases



Amount of Interest in Searching



Agricultural Expertise